



Seneca Nation of Indians

Cooperating Technical Partners Mapping Activity Statement

Mapping Activity Statement No. 2006-SNI-001

Digital Flood Insurance Rate Map Production and Development of Updated Flood Data

In accordance with the Cooperating Technical Partners (CTP) Partnership Agreement dated August 13, 2005 between the Seneca Nation of Indians (SNI) and the Federal Emergency Management Agency (FEMA), Mapping Activity Statement (MAS) No. 2005-SNI-001 is as follows.

Section 1: Objective and Scope

The objective of the Flood Map Project documented in this MAS is to develop a Digital Flood Insurance Rate Map (DFIRM) and Flood Insurance Study (FIS) report for the Seneca Nation of Indians. The DFIRM and FIS report will be produced in the FEMA Community Based Format.

Existing GIS data and study needs for the community will be researched, obtained, organized and uploaded to the Multi-hazard Information Platform (MIP). Scoping will be necessary to determine the final scope of work for this project.

Within 180 days of this agreement, the SNI, in coordination with the National Service Provider (NSP), shall input the scope of work into the FEMA Scoping tool. This includes information concerning community ordinance data, local GIS data availability, and the flood reach data for existing and proposed conditions. FEMA Scoping tool information can be found at <http://www.hazards.gov/resources/scoping.htm>.

The following will complete this Flood Map Project:

- the Seneca Nation of Indians;
- the Federal Emergency Management Agency supported by the NSP, a FEMA contractor.

The activities for this Flood Map Project, including required Quality Assurance/Quality Control (QA/QC) reviews, and the Mapping Partners that will complete them are summarized in Table 1-1. All activities that are to be accomplished by SNI or contractors to SNI, including contractors that may be selected after the project startup, are included in the "SNI" column. The sections of this MAS that follow Table 1-1 describe the specific activities, responsible Mapping Partner(s), FEMA standards that must be met, and resulting map components.

Table 1-1. Summary of Project Activities and Assignments

Activities	SNI	FEMA (NSP)
Activity 1: Pre-Scoping	X	
Activity 2: Scoping	X	X
Activity 7: Independent QA/QC Review of Hydrologic Analyses	X	
Activity 9: Independent QA/QC Review of Hydraulic Analyses	X	
Activity 17: Outreach	X	

FEMA has developed tools to assist in the development of the flood hazard data studies and the Digital Flood Insurance Rate Maps (DFIRMs). FEMA will, through the NSP, provide access to and training in these tools.

The Seneca Nation of Indians will be required to submit scoping-related data in accordance with the Data Capture Standards. Submitting data in these standards will aid in more efficient quality control reviews, data storage, archiving, and for future study updates. **Guidance for Data Capture Standards and other activities in this MAS are contained in Appendix I, “Guidelines and Specifications for Flood Hazard Mapping Partners”.** Only those Subsections of Appendix I specifically referenced throughout this document apply, not the entire Appendix.

Activity 1 – Pre-Scoping

Responsible Mapping Partner: the Seneca Nation of Indians

Scope: Pre-Scoping or Mapping Needs Assessment forms the building block for the Scoping Phase. This task involves collecting data from a variety of sources including community surveys, other Federal and State Agencies, NFIP State Coordinators, Community Assistance Visits (CAVs) and FEMA archives. The Seneca Nation of Indians will evaluate the current effective FIS report and FIRM maps to see if they need to be updated. Lists of mapping needs will be obtained from the MNUSS database, community surveys and CAVs, if available. FEMA will assist in the acquisition of available data from the USACE.

Data collection will include obtaining the best available base map materials (e.g., corporate limits, roads, orthophotos) along with stream centerline files. The Seneca Nation of Indians will provide historical data, vertical datum & orthoimagery. The data will be used during the Scoping Task and will be imported into the Scoping Tool by SNI and/or its partners. In the Scoping Tool, all streams should have unique names, the limits of the effective FEMA studies should be identified, Letters of Map Change areas should be identified, and community requests should be identified. This task also includes populating the stream lines with existing and scoped studies currently underway.

Standards: All work under Activity 1 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: the Seneca Nation of Indians shall make the following products available to FEMA:

- Copies of all digital files obtained and lists of files that may be available at a later date;

- Summary of the Community's needs; and
- Scoping Tool project files.

Information on the Scoping Tool can be downloaded from <http://www.hazards.gov/resources/scoping.htm>.

Activity 2 – Scoping

Task 2-1 Project Team

Responsible Mapping Partner: the Seneca Nation of Indians

Scope: A Project Team will be established that will consist of a Project Management Team and a Project Operations Team. The Project Management Team will include representatives from SNI, the FEMA Regional Office and others as appropriate. The responsibility of the Management Team will be to coordinate the activities of this project. The Operations Team will consist of members of the management team plus other mapping partners and NFIP stakeholders whose collective capabilities will provide the resources necessary to successfully complete the Flood Map Project. Project Team membership may be modified as needed.

Standards: All work under Activity 2 shall be performed in accordance with the standards and guidelines specified by FEMA for applicable work.

Deliverables:

- A document listing the project management team along with their full contact information and any future updates as needed.
- Update of the Scoping Tool files to include the Project Team and contact information.

Appendix I may be downloaded from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/pdf/flm/frm_gsai.pdf.

Task 2-2 Project Management Plan

Responsible Partner: the Seneca Nation of Indians

Scope: The SNI will develop a Project Management Plan to describe the coordination protocol and general management objectives of the entire project. The plan will identify the overall Project, Project Team, the lines and protocols of communication between the community and the Team members, protocols for internal flow of information among the members of the Team, the project objectives, general milestones of the Flood Map Project, QA/QC review requirements, record keeping, and project completion goals. This will be a preliminary plan subject to final agreement and approval.

The Project Management Plan will constitute the living document for the operation of the project. Copies of the document will be distributed to all members of the Project Team. As the project advances, revisions deemed necessary for improving the Project Management Plan will be incorporated into the plan and distributed to all Team members as well.

Standards: All work under Activity 2 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverable: The Project Management Plan in digital format.

Appendix I may be downloaded from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/pdf/fhm/firm_gsai.pdf

Task 2-3 Project Team Conference Calls or Meetings

Responsible Partner: the Seneca Nation of Indians

Scope: Following the completion of the Project Management Plan, a meeting or conference call will be arranged including all of the Project Management Team members. The Seneca Nation of Indians will be asked to provide input for its assessment of the flood mapping needs, available data for base maps, any existing studies or ongoing projects that may have an influence on flood mapping, the community's potential as a CTP, and the involvement of other regional or state agencies that may have an input for the map development process.

Standards: All work under Activity 2 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverable: A digital document documenting discussions during the conference. .

Appendix I may be downloaded from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/pdf/fhm/firm_gsai.pdf.

Task 2 –4 Preliminary Research Activities

Responsible Partner: the Seneca Nation of Indians

Scope: Preliminary Research Activities:

- 1) researching available data and effective information that will contribute to the Flood Map Project.

The following tasks shall be completed to research effective information: conduct a thorough Mapping Needs Assessment (unless one has already been conducted); inventory the FEMA archives for effective FIRM panels, FIRM panels, FIS reports, and other flood hazard data or existing study data; summarize the information in the MNUSS database; summarize contiguous community agreement checks; review Community Assistance Visits and Contacts (CAVs.CACs) and Community file information; and develop a "scoping map" and an overview of the results of the research. FEMA will provide information available on CAVs, CACs and the community file.

The following tasks shall be completed to research available data for Flood Map Project: identify available base map information; identify available topographic data; identify available flood hazard data; and identify other available hydrologic and hydraulic information and data.

Standards: All work under Activity 2 shall be performed in accordance with the standards specified in Section 5 of this MAS. An Available Data Inventory template is provided in Appendix I, Subsection I.1.6 of the *Guidelines and Specifications for Flood Hazard Mapping Partners*.

Deliverables: An Available Data Inventory digital document.

Appendix I may be downloaded from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/pdf/fhm/firm_gsai.pdf.

Task 2-5 Potential Obstacles

Responsible Partner: the Seneca Nation of Indians

Scope: The Project Management Team shall identify potential obstacles in an effort to learn of any issues that could delay or prohibit the Flood Map Project. Some examples of potential obstacles to completing the project in a timely fashion include the following: inability to address mapping needs adequately with available funding; difficulty coordinating community funding with FEMA funding; lack of an available base map meeting FEMA minimum specifications (described in Appendix K of the *Guidelines and Specifications for Flood Hazard Mapping Partners*); hydrologic and/or hydraulic issues; community concerns; reliance on other studies or data (e.g., topographic mapping) that will not be available within the project's scheduling constraints; needs not having as high a priority as originally identified; and other considerations (Federal/State/non-governmental organizations, programmatic, disaster-related, legal).

The Project Management Team shall explore potential issues on an ongoing basis. If potential obstacles are identified that could halt or significantly hinder the completion of the project, the Project Management Team shall evaluate all possible alternatives and develop an appropriate course of action as soon as practicable. This checklist is a "living" document that should be updated as necessary throughout the lifecycle of the project.

Standards: All work under Activity 2 shall be performed in accordance with the standards specified in Section 5 of this MAS. A Potential Obstacle to Project Completion Checklist template is provided in Appendix I, Subsection I.1.7 of the *Guidelines and Specifications for Flood Hazard Mapping Partners*.

Deliverables: A Potential Obstacle to Project Completion Checklist in digital form.

Appendix I may be downloaded from the FEMA Flood Hazard Mapping Web site at:
http://www.fema.gov/pdf/fhm/frm_gsai.pdf.

Task 2-6 Draft Project Scope

Responsible Partner: the Seneca Nation of Indians/FEMA

Scope: Based on the collected information, the Seneca Nation of Indians will develop a Draft Project Scope of the identified mapping needs of the tribal lands of the Seneca Nation of Indians. Input received from the FEMA Regional Project Officer and other community agencies identified in the scoping document will be used in the development of the Draft Project Scope. The following items will be addressed in the Draft Project Scope: review available information; determine if and how effective FIS data can be used in new project; identify other data needed to complete the Project and its source; and the DFIRM format.

The Draft Project Scope will establish priority levels for flooding sources to be analyzed and mapped, and estimate schedules and associated costs for completion of the components of flood mapping.

After submission of the Draft Project Scope to FEMA, a conference call will be arranged among Project Management Team members and appropriate community representatives to discuss and refine the Draft Project Scope. Results of the conference call will be summarized.

Standards: All work under Activity 2 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: A Draft Project Scope document in digital form and an update of the Scoping Tool files to include the draft scope; a document summarizing the conference call.

Appendix I may be downloaded from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/pdf/fhm/frm_gsai.pdf.

Task 2-7 Revised Draft Project Scope

Responsible Partner: the Seneca Nation of Indians/FEMA

Scope: Based on the input received during the conference call, a “Revised Draft Project Scope” will be prepared. This document will be submitted to the Project Team for further discussion during the project Scoping Meeting.

Standards: All work under Activity 2 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: A Revised Draft Project Scope document and an update of the Scoping Tool files to reflect any changes to the Scope of Project.

Appendix I may be downloaded from the FEMA Flood Hazard Mapping Web site at: http://www.fema.gov/pdf/fhm/frm_gsai.pdf.

Task 2-8 Mapping Needs List Prioritization and Finalization

Responsible Partner: the Seneca Nation of Indians/FEMA

Scope: The Project Management Team shall review the mapping needs list, review the research findings, and make selections of proposed methods for obtaining/producing flood data. Any additions or changes to the needs list shall be discussed with all members. All needs shall be prioritized. In general, highest priority shall be given to the following areas: areas of dense existing or anticipated development, including areas where new road crossings have been constructed over stream(s); areas affected by flood-control structures and/or channelization; areas where natural physical changes in the floodplain have been significant (due to subsidence or extreme erosion, for example); areas that were studied by approximate methods and unmapped areas, especially those subject to development pressure; areas where the community has experienced flooding outside mapped floodplains, with severe damage to buildings and/or infrastructure; areas where mapped flood hazards do not match those shown on contiguous FIRMs (unless those FIRMs are not considered to be accurate); and areas where flood data (BFEs, floodplains, and regulatory floodways) are likely to be changed the most by a restudy.

Standards: All work under Activity 2 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: The final mapping needs list along with priorities

Appendix I may be downloaded from the FEMA Flood Hazard Mapping Web site at: http://www.fema.gov/pdf/fhm/frm_gsai.pdf.

Task 2-9 Refinement of Draft Scope of Project

Responsible Partner: the Seneca Nation of Indians/FEMA

Scope: Based on the discussion of mapping needs, the Seneca Nation of Indians and FEMA Project Officer will finalize the areas to be included in the project based on recommendations provided by the

Project Team and available budget. Areas to be studied by detailed and approximate methods shall be identified. The following issues will be discussed and refined:

Review and Refinement of Flood Hazard Identification Methodologies:

The Project Team shall discuss the extent of riverine or coastal modeling required for the project. The research completed during the pre-Scoping Meeting phase shall be reviewed to determine the extent and applicability of previous modeling. Issues to be discussed include the following: models to be used from FEMA's approved models list; requirements for tie-ins to adjacent NFIP maps; areas where complex models might be required; and coordination on Coastal Issues.

Review of Proposed Paneling Scheme:

The scoping map shall be used to review the proposed paneling and scale scheme.

Review and Refinement of Base and Topographic Map Sources:

FEMA's base map specifications will be discussed. The discussion shall include the following topics: Base map source (i.e., locally developed data or DOQs meeting FEMA's minimum specifications) to be used for the project; Topographic and planimetric data sources; Coordination of countywide issues, if necessary; horizontal and vertical datums; and acquisition of the base map, if digital files are not available.

Finalization of Map Production and Database Options:

The proposed DFIRM format and optional features and data for the enhanced DFIRM Database (e.g., GIS data for watershed boundaries, stream reach hydrologic network structure, land use data, soil data, digital elevation certificates, photographs of structures) from the draft Scope of Project shall be reviewed, refined, and finalized.

Standards: All work under Activity 2 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: A digital Draft Project Scope document and update of the Scoping Tool files.

Appendix I may be downloaded from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/pdf/fhm/frm_gsai.pdf.

Task 2-10 Assignment of Project Team Member Tasks

Responsible Partner: the Seneca Nation of Indians

Scope: The objective is for each Project Team member to have a clear understanding of his or her role and responsibilities for the project. The Task Assignment and Scheduling Worksheet in *Guidelines and Specifications for Flood Hazard Mapping Partners*, Appendix I, Subsection I.2.5 can be used to make assignments and develop a schedule for the project. The Flood Mapping Project Process Flowchart, which is included in Appendix I, Subsection I.2.6 may also be useful.

Standards: All work under Activity 2 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverable: A report documenting the assignments of the Project Team members in accordance with the projected delivery dates specified in task orders. Delivery dates may be modified by team agreement when necessary.

Appendix I may be downloaded from the FEMA Flood Hazard Mapping Web site at:
http://www.fema.gov/pdf/fhm/frm_gsai.pdf.

Task 2-11 Mapping Activity Statement Revision

Responsible Partner: FEMA

Scope: FEMA shall work closely with the Seneca Nation of Indians to develop or revise the Mapping Activity Statement (MAS) based on task assignments made during the Scoping Meeting and any subsequent changes. FEMA shall review and approve the MAS before it is distributed to the Project Team members. The MAS shall follow the template provided in Appendix I, Subsection I.3.1 of the *Guidelines and Specifications for Flood Hazard Mapping Partners*.

This agreement may be amended at any time through the consent of both parties.

Standards: All work under Activity 2 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: The deliverable shall be the revised Mapping Activity Statement.

Appendix I may be downloaded from the FEMA Flood Hazard Mapping Web site at
http://www.fema.gov/pdf/fhm/frm_gsai.pdf.

Task 2-12 Finalization of Project Management Plan

Responsible Partner: FEMA

Scope: In consultation with the Seneca Nation of Indians and the FEMA Regional Project Officer, the final MAS shall be incorporated into the Project Management Plan, FEMA shall establish intermediate project reporting and project close-out requirements. The Plan shall then be ready for finalization.

Standards: All work under Activity 2 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: A Final Project Management Plan report and the backup or supplemental information used in writing this plan.

Appendix I may be downloaded from the FEMA Flood Hazard Mapping Web site at:
http://www.fema.gov/pdf/fhm/frm_gsai.pdf.

Task 2-13 Updates to Mapping Information Platform (MIP).

Responsible Partner: the Seneca Nation of Indians with the support of NSP

Scope: Once the MAS is finalized, National Service Provider shall update the MIP to indicate that the needs included in the MAS are being addressed in an ongoing Flood Map Project. They shall also update the MIP database to add any new needs or revise existing needs identified during the scoping activities that will not be addressed by the current project. Additionally, they shall flag the needs that could not be verified during the research and community coordination activities as “not verified.”

Standards: All work under Activity 2 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: Email from the MIP administrator stating that the MIP update was successful.

Appendix I may be downloaded from the FEMA Flood Hazard Mapping Web site at:
http://www.fema.gov/pdf/fhm/firm_gsai.pdf.

Activity 3 - Independent QA/QC Review of Hydrologic Analyses

Responsible Mapping Partner: the Seneca Nation of Indians

Scope: The Seneca Nation of Indians shall review the technical, scientific, and other information submitted by FEMA mapping contractor(s) selected to conduct hydrologic analyses for SNI flood hazard areas. The purpose of this review is to ensure that the data and modeling are consistent with FEMA standards and standard engineering practice and are sufficient to prepare the DFIRM. This work shall include, at a minimum, the activities listed below.

- Review the submittal for technical and regulatory adequacy, completeness of required information, and supporting data and documentation. The technical review is to focus on the following:
 - Use of acceptable models;
 - Use of appropriate methodology(ies);
 - Correctly applied methodology(ies)/model(s), including QC of input parameters;
 - Comparison with gage data and/or regression equations, if appropriate; and
 - Comparison with discharges for contiguous reaches or flooding sources.
- Maintain records of all contacts, reviews, recommendations, and actions and make them readily available to FEMA.
- Maintain an archive of all data submitted for hydrologic modeling review. (All supporting data must be retained for 3 years from the date funding recipient submits its final expenditure report to FEMA.)

Standards: All work under Activity 3 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: In accordance with the Technical Support Data Notebook (TSDN) format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, the Seneca Nation of Indians shall make the following products available to FEMA:

- A Summary Report that describes the findings of the independent QA/QC review; and
- Recommendations to resolve any problems that are identified during the independent QA/QC review.

Appendix M may be downloaded from the FEMA Flood Hazard Mapping Web site at
http://www.fema.gov/pdf/fhm/firm_gsam.pdf

Activity 4 - Independent QA/QC Review of Hydraulic Analyses

Responsible Mapping Partner: the Seneca Nation of Indians

Scope: The Seneca Nation of Indians shall review the technical, scientific, and other information submitted by FEMA mapping contractor(s) selected to conduct hydraulic analyses for SNI flood hazard

areas. The purpose of this review is to ensure that the data and modeling are consistent with FEMA standards and standard engineering practice and are sufficient to prepare the DFIRM. This work shall include, at a minimum, the activities listed below.

- Review the submittal for technical and regulatory adequacy, completeness of required information, and supporting data and documentation. The technical review is to focus on the following:
 - Use of acceptable model(s);
 - Starting water-surface elevations;
 - Cross-section geometry;
 - Manning's "n" values and expansion/contraction coefficients;
 - Bridge and culvert modeling;
 - Flood discharges;
 - Regulatory floodway computation methods; and
 - Tie-ins to upstream and downstream non-revised Flood Profiles.
- Flag potential problems using FEMA approved programs, and focus review efforts.
- Maintain records of all contacts, reviews, recommendations, and actions and make them readily available to FEMA.
- Maintain an archive of all data submitted for hydraulic modeling review. (All supporting data must be retained for 3 years from the date funding recipient submits its final expenditure report to FEMA.)

Standards: All work under Activity 4 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, the Seneca Nation of Indians shall make the following products available to FEMA:

- A Summary Report that describes the findings of the independent QA/QC review; and
- Recommendations to resolve any problems that are identified during the independent QA/QC review.

Appendix M may be downloaded from the FEMA Flood Hazard Mapping Web site at:
http://www.fema.gov/pdf/fhm/fhm_gsam.pdf.

Activity 5—Outreach

Responsible Entity: the Seneca Nation of Indians, FEMA and NSP

Scope: The outreach activities for a Flood Map Project can best be understood as a process that begins during the Project Scoping phase and continues through the Map Production and Post-preliminary phases. A regulatory overview of required activities is followed by a description of tools that can be used in working with stakeholders to keep them informed and to solicit their input.

The overarching goal for conducting outreach is to create a climate of understanding and ownership of the mapping process. Well-planned outreach activities can reduce political stress, confrontation in the media, and public controversy, which can arise from lack of information, misunderstanding, or misinformation.

These outreach activities also can assist FEMA and other members of the Project Team in responding to congressional inquiries.

By proactively reaching out to all key stakeholders as early in the Flood Map Project as possible, the maps can be used to their full potential. The likelihood of appeals may also be reduced or eliminated. Specific responsible Mapping Partner activities shall include, but are not limited to:

- Establishing two-way communication to address the needs of, inform and obtain feedback from, the stakeholders;
- Ensuring compliance with due process requirements;
- Interacting with technical representatives to ensure production of accurate and up-to-date maps;
- Enhancing ownership by communities; and
- Tracking, monitoring, and evaluating outreach activities and adjusting efforts according to ongoing feedback and evolving project needs.

Standards: All work conducted under this task shall conform to the standards specified for this task in Section 5, “Standards” of this MAS. In the event of any contradictions between the MAS and the standards, the standards shall control.

Deliverables: Upon Completion of Outreach and Coordination the responsible Mapping Partner shall deliver the following to the FEMA Regional Project Officer in accordance with the delivery dates specified in task orders:

- A report detailing outreach and coordination activities; and Backup or supplemental information used in writing this report.

SECTION 2—Technical and Administrative Support Data Submittals and special problem reports

The Project Team members for this Flood Map Project that have responsibilities for activities included in this MAS shall comply with the data submittal requirements summarized below.

All supporting documentation for the activities in this MAS shall be submitted in the TSDN format in accordance with Appendix M of the FEMA *Guidelines and Specifications for Flood Hazard Mapping Partners*, dated April 2003. Appendix M is available for viewing or download on the FEMA Web site at http://www.fema.gov/pdf/fhm/frm_gsam.pdf. Table 2-1 indicates the sections of the TSDN that apply to each mapping activity.

Table 2-1. Mapping Activities and Applicable TSDN Sections

TSDN Section	Mapping Activities				
	1	2	3	4	5
General Documentation					
Special Problem Reports	X	X	X	X	X
Telephone Conversation Reports	X	X	X	X	X

Meeting Minutes/Reports	X	X	X	X	X
General Correspondence	X	X	X	X	X

If any issues arise that could affect the completion of an activity within the proposed scope or budget, the responsible Mapping Partner shall complete a Special Problem Report (SPR) as soon as possible after the issue is identified and submitted to FEMA. The SPR is to describe the issue and propose possible resolutions. (For additional information on SPRs, refer to Appendix M, Subsection M.2.1.1 of *Guidelines and Specifications for Flood Hazard Mapping Partners*.)

Additionally, the NSP shall collect and maintain a set of products for all Activities and shall compile a comprehensive TSDN for the entire project.

Section 3—Period of Performance

The mapping activities documented in this MAS will begin on October 01, 2005, and will be completed no later than September 30, 2007. The mapping activities may be terminated at the option of FEMA or the Seneca Nation of Indians in accordance with the provisions of the Cooperating Technical Partnership Agreement dated August 13, 2005.

Section 4—Funding/Cost-Sharing

FEMA is providing funding, in the amount of \$1,000,000 to the Seneca Nation of Indians for the completion of the Flood Map Project documented in this MAS. Additional resources required to complete the assigned activities for this Flood Map Project shall be negotiated through future MASs.

Section 5—Standards

The standards relevant to this MAS are provided in Tables 5-1 and 5-2. Information on the correct volume, appendix, section, or subsection of the FEMA *Guidelines and Specifications for Flood Hazard Mapping Partners* to be referenced for each mapping activity are summarized in Table 5-2. These Guidelines are available for viewing or download from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/fhm/dl_cgs.shtm.

In addition, Data Capture Standards referenced in the previous sections are to be applied to the project for the data formats to be submitted to FEMA.

Table 5-1. Applicable Standards for Project Activities

Applicable Standards	Activities				
	1	2	3	4	5
<i>Guidelines and Specifications for Flood Hazard Mapping Partners</i> , April 2003	X	X	X	X	
American Congress on Surveying and Mapping Procedures	X	X			
Global Positioning System (GPS) Surveys: National Geodetic Survey (NGS-510), "Guidelines for Establishing GPS-Derived Ellipsoid Heights," November 1997	X	X			
Engineer Manual 1110-1-1.000, <i>Photogrammetric Mapping</i> (USACE), July 1, 2002	X	X			
Engineer Manual 1110-2-1003, <i>Hydrographic Surveys</i> (USACE), January 1, 2002	X	X			
"Numerical Models Accepted by FEMA for NFIP Usage," Updated April 2003	X	X	X	X	
<i>Content Standard for Digital Geospatial Metadata</i> (Federal Geographic Data Committee), 1998	X	X			
<i>Document Control Procedures Manual</i> , December 2000	X	X			
<i>44 Code of Federal Regulations Parts 65, 66 & 67</i> , October 2005					X

Table 5-2. Project Activity Descriptions

Activity Number	Activity Description	Applicable Volume, Section/Subsection, and Appendix
1	Pre-Scoping	Guidelines and Specifications for Flood Hazard Mapping Partners (G&S) Volume I, and Appendix I
2	Scoping	(G&S) Volume I, and Appendix I
3	Independent QA/QC Review of Hydrologic Analyses	(G&S) Volume I, Section 1.4 (specifically Subsection 1.4.1) (G&S) Appendix A, Section A.4 (G&S) Appendix C, Section C.2 (G&S) Appendices E, F, G, H, and M
4	Independent QA/QC Review of Hydraulic Analyses	(G&S) Volume I, Section 1.4 (specifically Subsection 1.4.1) (G&S) Appendix A, Section A.4 (specifically Subsection A.4.7) (G&S) Appendix C, Section C.5 (G&S) Appendices B, E, F, G, H, and M
5	Outreach	44 Code of Federal Regulations Parts 65, 66 & 67, October 2005

Section 6—Schedule

The activities documented in this MAS shall be completed in accordance with the project schedule shown in Table 6-1. If changes to this schedule are required, the responsible Mapping Partner shall coordinate with FEMA and the other Mapping Partners in a timely manner.

Table 6-1. Project Schedule

ACTIVITIES	RESPONSIBLE PARTNER(S)	DATE DUE
Activity 1 – Pre-Scoping	SNI	09/30/06
Activity 2 - Scoping	SNI	03/31/07
Activity 3—Independent QA/QC Review of Hydrologic Analyses – Erie County	SNI	12/31/06
Activity 4 – Independent QA/QC Review of Hydraulic Analyses – Erie County	SNI	03/31/07
Activity 5 - Outreach	SNI/FEMA/NSP	ongoing

***Due dates may be amended by agreement of the involved parties**

Section 7—Technical Assistance and Resources

Project Team members may obtain copies of FEMA-issued LOMCs, archived engineering backup data, and data collected as part of the FEMA Mapping Needs Assessment Process from the NSP, who may be contacted by telephone at 703-960-8800 or by facsimile at 703-960-9125.

General technical and programmatic information can be downloaded from the FEMA Web site (<http://www.fema.gov/fhm/>). Specific technical and programmatic support may be provided through the NSP; such assistance should be requested through the FEMA Project Officer specified in Section 11 of this MAS.

Project Team members also may consult with the FEMA Regional Project Officer to request support in the areas of selection of data sources, digital data accuracy standards, assessment of vertical data accuracy, data collection methods or subcontractors, and GIS-based engineering and modeling training.

Section 8—Contractors

The Seneca Nation of Indians does not intend to use the services of a contractor for the Flood Map Project documented in this MAS. In subsequent years, if SNI enters into negotiated work that requires the services of contractors they shall ensure that the procurement for all contractors used for this Flood Map Project complies with the requirements of 44 CFR 13.36 and Seneca Nation Law.

Part 13 may be downloaded in PDF or text format from the U.S. Government Printing Office Web site at http://www.access.gpo.gov/nara/cfr/waisidx_02/44cfr13_02.html.

Section 9—Financial Reporting

Because funding has been provided to the Seneca Nation of Indians by FEMA for the Flood Map Project documented in this MAS, financial reporting requirements for the Seneca Nation of Indians will be in accordance with Cooperating Technical Partnership Agreement Articles V and VI.

The Seneca Nation of Indians shall provide financial reports to the FEMA Regional Project Officer and Assistance Officer in accordance with 44 CFR 13.40 & 13.41 and Seneca Nation Law. The Seneca Nation of Indians will meet with the NSP and/or FEMA semi-annually to review the progress of the project.

The Seneca Nation of Indians will provide to the NSP quarterly reports for each of the mapping activity statements. This may, at FEMA's discretion be a spreadsheet template to be completed or the Mapping Information Platform (MIP) system may be used. It may include dollars spent, hours spent, and percent complete of each major Flood Map Project activity (e.g., field survey, terrain, hydrology) on a county basis. Specific reporting requirements will be finalized as a part of the scoping meeting.

Section 10—Points of Contact

The points of contact for this Flood Map Project are Mary Colvin, the FEMA Regional Project Officer; Lou Erichiello, FEMA Region II; Michele Keyes, the Project Manager for the Seneca Nation of Indians; or subsequent personnel of comparable experience who are appointed to fulfill these responsibilities. When necessary, the assistance of the NSP should be requested through the FEMA Project Officer, Mary Colvin.

In addition, the NSP is required to coordinate project issues with the responsible Mapping Partner that created the MAS deliverable or portions of the MAS deliverable product and will document all such coordination activities with the CTP and FEMA.

Section 11—Project Coordination

Throughout the project, all members of the Project Team will coordinate, as necessary, to ensure the products meet the technical and format specifications required and contain accurate, up-to-date information. Coordination activities may include:

- Meetings, teleconferences, and videoconferences with FEMA and other Project Team members quarterly;
- Telephone conversations with FEMA and other Project Team members as required;
- Updates to the MIP, and other FEMA status information systems in accordance with requirements in Volumes 1 and 3 of *Guidelines and Specifications for Flood Hazard Mapping Partners*; and
- E-mail, facsimile transmissions, and letters, as required.

Each party has caused this MAS to be executed by its duly authorized representative.



Barry Snyder

President
The Seneca Nation of Indians

8/17/06

Date



Mary Colvin
Chief, Mitigation Branch
Federal Emergency Management Agency, Region II

8/11/06

Date